GEOGRAPHICAL LITERATURE AND MAPS

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BOOK REVIEWS AND NOTICES

(The size of books is given in inches to the nearest half inch.)

NORTH AMERICA

The Mount McKinley Region, Alaska. By Alfred H. Brooks. With descriptions of the Igneous Rocks and of the Bonnifield and Kantishna Districts, by L. M. Prindle. Professional Paper 70, 234 pp., maps, illustrations and index. U. S. Geol. Survey, 1911.

In the exploration and development of Alaska, the work of the United States Geological Survey is destined to occupy first rank. It has been a geographic work of the highest importance, oftentimes carried on in a wholly unknown and unexplored field, and done in such an unostentatious manner that the outside world has known little about it. Some of the journeys made by members of the United States Geological Survey, perhaps barely and modestly referred to in a brief narrative prefacing a scientific report, have been really remarkable instances of daring exploration, rivaling some of the expeditions of less scientific character, that, with proper advertisement, have received widespread attention.

Among these expeditions is that made by Mr. Brooks, in 1902, into the then practically unknown Mount McKinley Region. In 105 days a distance of 800 miles was covered, largely in an unexplored region, traveling from the seacoast near the head of Cook Inlet across the Alaska Range to the Yukon River. During this journey, lasting from June 1 to September 15, the party traveled every day but nine, and when they reached Rampart on the Yukon only eleven out of the original twenty horses remained. Even the modest narrative of the expedition gives some idea of the great difficulties and dangers encountered.

Various conditions interfered with the early publication of the full report of this expedition, though some parts of it have appeared. As compensation for this delay it has been possible for Brooks to make use of the explorations of a number of other members of the Geological Survey in this general region and therefore to make his Mount McKinley report cover a far wider area than that of the mere traverse of 1902 and to introduce a much broader and more general consideration of the geographic and geologic features of this large area than would have been possible if published on the return of the expedition. Whereas the investigations of the original expedition covered an area of about 10,000 square miles, the subsequent studies have made it possible to discuss the features of an area equal to over 30,000 square miles.

The main portion of the Mount McKinley report is naturally devoted to geology, but there is a clear description of the geography of the large area included and an interpretation of the main physiographic features. It is shown that the

geological history has been exceedingly complex as a result of changes of level, rock folding, igneous intrusion, and denudation; and, while not all the elements of the problems presented are worked out, the main features are discussed with that breadth of view which Brooks has already so clearly exhibited in his Professional Paper on "The Geology and Geography of Alaska." The paper is clearly and interestingly written, it includes a vast amount of detailed information, the many problems of general interest are adequately presented and discussed, and there are abundant illustrations, both maps and half tones. Some of the latter are really remarkable mountain photographs. One section of the report is devoted to a discussion of the topographic survey by D. L. Reabury, who adopts as the elevation of Mount McKinley 20,300 feet and of Mount Foraker 17,100 feet.

Brooks believes the region covered by his report to be one of high future promise. Already there has been considerable gold mining, and the region also includes the well known Matanuska coal fields concerning which Brooks says: "The high-grade steaming and coking coals of the Matanuska Valley have, so far as known, no equal in the Pacific states except in the Bering River field." Yet the extensive coal deposits of this region are untouched. He says: "Take it all in all, the Mount McKinley province, as here defined, is one of the richest parts of Alaska. It only needs better means of communication and more capital for large enterprises to continue the prosperity which it has had in the past. Such advancement will attract a population which in turn will make a local market for the farmer and assure a development of the agricultural resources, which are of no mean proportions . . The whole matter of agriculture in this part of Alaska hinges on the finding of a market. If railroad transportation to Fairbanks through the Susitna valley were available, no doubt an agricultural population would spring up along the route of travel."

Brooks makes clear, what is widely known to those who are familiar with Alaskan conditions, that neither the coal fields nor the agricultural resources can do other than lie dormant until the region is rendered accessible by railroads. Even in gold mining, only the richest ground "can be profitably exploited under the present high cost, which can not be materially reduced except by more direct and cheaper lines of communication with tidewater." It is the author's belief that a railway system is demanded from the coast into the Susitna and Matanuska basins, thence on to the navigable Tanana, supplemented by necessary branches and by a system of wagon roads and trails. He says that when such a transportation system "has been established to supplement the present water transportation, then, and then only, can a large industrial advancement be expected in this province."

Upon the question of the relative merits of government and private ownership, Mr. Brooks, as a scientific worker under the National Government, naturally remains silent. R. S. TARR.

The Mineralogy of Arizona. By F. N. Guild. 103 pp. and index. The Chemical Publishing Co., Easton, Pa., 1910. 6½ x 5.

This small volume, in describing the minerals of Arizona, follows the classification used by Dana. The chapter headings are, accordingly, those of the descriptive mineralogy portion of the "Text Book of Mineralogy." In general, the notes on the minerals are brief, but when the minerals are peculiar to the